

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-029893**Date Inspected:** 31-Jul-2013**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Jesus Cayabyab**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** SAS Tower**Summary of Items Observed:**

Caltrans Quality Assurance Inspector (QA) Joe Adame arrived at the American Bridge/Fluor (ABF) JV job site between the times noted above in order to monitor ABF Quality Control functions and the in process work being performed by ABF production personnel. The following items were observed:

In Process Visual Inspection

RWR201305-009

ESW W-043, Location "V"-Face B

The QA Inspector observed, at random intervals, ABF welder Mike Jimenez (WID-4671) performing Shield Metal Arc Welding (SMAW) of the repair excavation on Electroslag Weld (ESW) "V", at face B location noted as:

Y= 6200~7000mm

L= 800mm

W= 80mm

D= 70mm

Welder 4671 was observed preheating the weld to over 300° Fahrenheit prior to welding using the Miller ProHeat 35 with heat induction blankets. The welder was using 4.0mm diameter electrode (E7018-1 HR4) per ABF Welding Procedure Specification (WPS) ABF-WPS-D15-1000-Repair Rev.3. The welding parameters were verified by ABF Quality Control (QC) Inspector Jesse Cayabyab with a Flukemeter (183 amps) and preheat was verified with temperature indicators. The welding observed appeared to be in compliance with the WPS noted above. Welding is approx. 75% complete at this location.

Investigative excavation

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ESW E-045,"F"-Face A:

RWR201307-004

The QA Inspector was later present to observe ABF apprentice welder Simon Ma performing exploratory excavation of ESW "F" Face A @ Y-8790mm, 8960mm to verify indications observed during Ultrasonic Testing pulse/echo & pitch/catch. Mr. Ma was performing the excavation using a disc and bit grinder and was instructed by ABF QC Inspector Jesse Cayayab stated to halt at hold points and allow QC/QA to inspect the excavation.

Location of the repair is as follows:

Weld excavated at 28mm- Linear indication previously observed @8840 was removed.

Weld excavated at 28mm- Linear indication previously observed @8960 was removed.

Final excavation Length Y=8670mm~9090mm (420mm), Width-60mm, Depth-28mm.

After grinding to bright metal the QC Inspector performed MT testing of the excavation to inspect for weld discontinuities at each hold point. ON this date ABF production were instructed by ABF Field Engineer Eric Blue to excavate the 180mm long toe crack indication to a depth of 3mm that is located on the surface of the ESW weld F. The toe crack location is at @ 8520mm~8700mm. QA and QC performed MT testing on the toe crack repair and observed that the indication remained. The investigative information regarding the toe crack was passed along to ABF and CT METS representatives for additional review. The QA Inspector also informed Tower SMR Aaron Prchlik of the issue observed. See TL-6028 for additional details on items inspected on this date.



Summary of Conversations:

Only general conversations with ABF/JV QC NDT personnel relevant to work and testing performed during this shift.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Gary Thomas (916) 764-6027, who represents the Office of Structural Materials for your project.

Inspected By: Adame,Joe

Quality Assurance Inspector

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Reviewed By: Mertz,Robert

QA Reviewer